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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET-NO.
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09/214,865 01/14/99 TAKISHITA

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WASHINGTON DC 20037

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EXAMINER

KIM, P

ART UNIT	PAPER NUMBER
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2857

DATE MAILED: 10/26/01

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

Office Action Summary

Application No.

09/214,865

Applicant(s)

TAKISHITA, YOSHIHIKO

Examiner

Paul Kim

Art Unit

2857

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 14 January 1999.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-45 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 4-7 and 16 is/are allowed.
- 6) ☒ Claim(s) 1-3, 8-15, and 17-45 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claims _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are objected to by the Examiner.
- 11) ☒ The proposed drawing correction filed on 14 January 1999 is: a) ☒ approved b) ☐ disapproved.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

Attachment(s)

- 15) ☒ Notice of References Cited (PTO-892)
- 16) ☒ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 17) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 18) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 19) ☐ Notice of Informal Patent Application (PTO-152)
- 20) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

2. Claims 4-7 and 16 are rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

With regard to claim 4, in lines 8-9, the phrase, "determining whether or not an *abnormal point* is contained in said *specific* ultrasonic inspection system", is not clearly described in the specification.

With regard to amended claim 16, the phrases "one of data output" (line 8) and "*diagnosing* said ultrasonic system based on the collected data" (last lines) were not adequately described in the specification.

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claims 4-7 and 16 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

With regard to claim 4, lines 8-9, the phrase "determining whether or not an *abnormal point* is contained in said *specific* ultrasonic inspection system", is indefinite for not specifically pointing out which part of the inspection system is to be tested for abnormal functionality and what kind of abnormality is being tested.

With regard to claim 6, lines 18-20, the phrase "determining whether or not an *abnormal point* is contained in said *specific* ultrasonic inspection system", is indefinite for not specifically pointing out which part of the inspection system is to be tested for abnormal functionality and what kind of abnormality is being tested.

With regard to amended claim 16, the phrases "one of data output" (line 8) and "*diagnosing* said ultrasonic system based on the collected data" (last lines) are indefinite for not clearly stating what is being diagnosed and how it is being diagnosed.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

6. - Claims 1-3, 14, 21, 24-26, 29-31, and 33 are rejected under 35 U.S.C. 102(b) as being unpatentable by Wood et al.

With regard to claim 1, Wood teaches an apparatus diagnosis imaging system comprising multiple ultrasonic systems (fig. 15), each containing a probe (fig. 1, part 12), system body (fig. 1, part 10), host computer (fig. 1, part 100 & fig. 15, part 242, 234), and a transmission line (fig. 1, part 42). Although Wood does not teach a data storage section in the host computer, it is inherent that a host computer contains some form of storage or memory to collect ultrasonic imaging information from the inspection systems.

With regard to claim 2, Wood teaches the data being a specimen data (col. 3, lines 1-3) and the host computer having determination means (fig. 1, part 102).

With regard to claim 3, Wood teaches at least one of the inspection systems comprising a determination means (fig. 2, part 28).

With regard to claim 14, Wood teaches a probe data reception means for receiving data from a specific inspection system (fig. 1, part 132).

With regard to claim 21, Wood teaches the ultrasonic inspection system transmitting having an ultrasonic probe data management function for transmitting and receiving ultrasonic signals (fig. 2, part 18) characterized by an external storage medium (fig. 2, part 24).

With regard to claims 24 and 29, Wood teaches an ultrasonic inspection system comprising a storage section (fig. 2, part 24).

With regard to claims 25 and 30, Wood teaches an ultrasonic inspection system comprising a display (fig. 1, part 26).

With regard to claim 26, Wood teaches an inspection management system with means to transmit and receive signals (fig. 2, part 18), inspects a specimen based on these signals (fig. 2, part 28), and store these signals in a storage device (fig. 2, part 24).

With regard to claim 31, Wood teaches an ultrasonic inspection system having an ultrasonic probe data management function for transmitting and receiving ultrasonic signals (fig. 2, part 18) and the system comprising a computer connected to one or more inspection systems (fig. 15, part 240), probe data collection means (fig. 1, part 14), and a storage section (fig. 1, part 24).

With regard to claim 33, Wood teaches an ultrasonic inspection system including a display (fig. 1, part 26).

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 8-13, are rejected under 35 U.S.C. 103(a) as being unpatentable over Wood as applied to claims 1-3, 14, 21, 24-26, 29-31, and 33, and further in view of Takashita and Elwell.

With regard to claims 8, 10, 11, and 13, Wood does not teach comparison means for comparing recent inspection data with a predetermined value. Takashita teaches an ultrasonic inspection apparatus with a capability to acquire inspection data, reference data, and average value to evaluate data (col. 10, lines 65-68). It would have been obvious to one of ordinary skill in the art at the time of the invention, to modify Wood, so that the ultrasonic inspection system could compare recent data to a predetermined data in order to determine product flaws.

With regard to claims 9, 10, 12, and 13, Wood does not teach comparing rate of change of data information with a predetermined value. Elwell teaches an ultrasonic transducer that compares rates of change of data to a predetermined rate of change (col. 4, lines 10-22). It would have been obvious to one of ordinary skill in the art at the time of the invention, to modify Wood, so that the ultrasonic inspection system could compare rate of change with a predetermined value in order to detect flaws in the data or apparatus being sampled.

Claims 22-23, 27-28, and 32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wood as applied to claims 1-3, 14, 21, 24-26, 29-31, and 33, and further in view of Shinomura.

With regard to claims 23 and 28, Wood does not teach executing inspection for receiving predetermined characteristic of the ultrasonic probe and storing the data in an

external storage medium. Shinomura teaches predetermined ultrasonic probe data being stored in a storage unit (col. 11, lines 59-65). It would have been obvious to one of ordinary skill in the art, at the time of the invention, to modify Wood, so that predetermined probe data can be stored in a storage unit in order to be able to determine wear characteristics of the ultrasonic probe over a period of time.

With regard to claims 22 and 27, Wood does not teach probe data being stored at manufacture time and data being updated each time the probe is inspected. Shinomura teaches an ultrasonic probe inspection means in which factory data is stored (col. 11, lines 59-65) and data being updated each time probe is inspected (col. 19, lines 24-27). It would have been obvious to one of ordinary skill in the art at the time of the invention, to modify Wood, so that the probe characteristic data can be stored during factory time and updated periodically in order to determine probe wear condition over time.

With regard to claim 32, Wood does not teach an ultrasonic testing apparatus re-inspecting the probe. Shinomura teaches an ultrasonic probe re-inspection means (col. 19, lines 24-27). It would have been obvious to one of ordinary skill in the art at the time of the invention, to modify Wood, so that the probe of the inspection system can be inspected in order to determine whether the probe is in top operating condition.

Claim 15 is rejected under 35 U.S.C. 103(a) as being unpatentable over Wood as applied to claims 1-3, 14, 21, 24-26, 29-31, and 33 and further in view of Senba.

With regard to claim 15, Wood does not teach the ultrasonic inspection system inspecting it's own components. Senba, as best can be determined by the reference,

teaches an ultrasonic inspection system that self-inspects its own components (abstract). It would have been obvious to one of ordinary skill in the art at the time of the invention, to modify Wood, so that the ultrasonic inspection system can inspect its own components in order to minimize breakdowns.

Claims 17 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wood as applied to claims 1-3, 14, 21, 24-26, 29-31, and 33, and further in view of Takashita.

With regard to claims 17 and 19, Wood teaches the ultrasonic inspection systems comprising a transmission / reception circuit (fig. 1, part 14 & col. 2, line 67 and col. 3, line 1), control section (fig. 2, part 18), storage means (fig. 1, part 24), waveform processing circuit (fig. 1, part 16), probe excitation means (fig. 1, part 14), test signal output means (fig. 1, part 14), data collection means (fig. 1, part 24), and determination means (fig. 2, part 28).

Wood does not teach a positioning means for placing the probe in the water tank of the ultrasonic inspection system. Takashita teaches a positioning means for an ultrasonic probe placed inside a water tank (col. 3, lines 31-33). It would have been obvious to one of ordinary skill in the art at the time of the invention, to modify Wood so that the ultrasonic system has probe positioning means in order to position the probe without manually doing so by hand.

With regard to claims 20, 33, 35, 36, 37, 38, and 41- 45 Wood teaches a display unit to output visual inspection information (fig. 1, part 26).

With regard to claims 34, 39, and 40, Wood teaches an ultrasonic inspection system comprising a storage section (fig. 2, part 24).

9. Claims 4-7 and 16 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, second paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter:

With regard to claims 4, 6, and 16, the prior art does not teach determining informalities by comparing test data of the probe both connected to and disconnected from the ultrasonic inspection system. Claims 5 and 7 are dependent on claim 4.

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Paul Kim whose telephone number is 703-305-7468. The examiner can normally be reached on M-F, 10:00-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Marc Hoff can be reached at 703-305-1710. The fax phone numbers for the organization where this application or proceeding is assigned are 703-308-7722 for regular and for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0956.

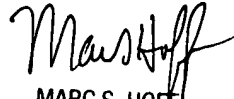
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PK

October 19, 2001


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